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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/656,078	09/04/2003	Paul W. McBurney	SS-734-16	8351

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EXAMINER

ISSING, GREGORY C

ART UNIT PAPER NUMBER

3662

DATE MAILED: 11/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/656,078

Applicant(s)


MCBURNEY ET AL.

Examiner

Gregory C. Issing

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 14 September 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 12-20 is/are pending in the application.
- 4a) Of the above claim(s) 20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 12-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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1. Newly submitted claim 20 is directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: claims 12-19 are directed to an integrated navigation receiver communication device for operation in normal and reduced power situations whereas claim 20 is directed to a method for limiting the number of oscillator crystals by reusing the frequencies generated by first and second numeric controlled oscillators.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claim 20 is withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the numeric controlled oscillator of claim 12 must be shown or the feature(s) canceled from the claim(s). The interrupts of claims 16 and 19 must be shown or the features cancelled. No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any

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required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

3. The drawings are objected to because in Figure 3, there are two one-way lines coupling the GPS chip to the phone CPU; however, there is no indication what these represent. If they refer to interrupts or some particular control, not the frequency/time request, then they should be labeled as such. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 12-19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 12, the language "it compensates such requested frequency" is indefinite since it is unclear what this refers to since no frequency has been requested.

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Claim 19 is not clearly defined, particularly "with event timing being phased by using offsets" since it fails to set forth with any clarity what the offsets are or where they are derived from.

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 12-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Horton et al (6,041,222) in view of Gronemeyer (6,662,107).

Horton et al disclose an integrated navigation receiver and communication device that share a frequency reference signal. Horton et al disclose a terminal 150 comprising a GPS subsystem 154 and a wireless communication subsystem 152. The GPS subsystem is configured to operate with a global navigation system while the wireless communication subsystem is configured to operate in essentially any of the type wireless communication networks. Each subsystem includes conventional subsystem components including antennas, processors and frequency signal generators. The integrated device includes a frequency synthesis mechanism for generating the required frequencies for both of the subsystems. The mechanism may be a part of either the GPS subsystem or the wireless communication subsystem, thus anticipating the claimed frequency control of the GPS receiver part. Additionally, it is taught that a potential frequency error of the frequency reference oscillator 190 can be significantly reduced when a frequency can be locked to a potentially very accurate signal from a carrier signal from the base station; thus, suggesting to the skilled artisan compensating for the frequency error using GPS signals when the mechanism is a part of the GPS subsystem.

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Horton et al differ from the claimed subject matter since the GPS subsystem is not specified as including two oscillators for selectively providing normal and low-power operational modes.

Gronemeyer teach power conservation in a GPS receiver wherein a K32 oscillator 302 is provided for operation during low-power operation and a GPS oscillator 204 providing an M11 signal for normal operation is provided and which is deactivated during the low-power operation to conserve power. Moreover, it is taught that once the precise GPS time is determined, the M11 and K32 signals are latched together and correlated with the real GPS time to improve and update the calibration tables (col. 4, par. 3-4).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Horton et al by incorporating power saving functions in the integrated navigation and communication device by in view of Gronemeyer wherein power saving functions can be provided by the use of first and second oscillators for respectively providing a first frequency for normal operation using a first oscillator and a second frequency for operating only those components required during low power operation using a much lower frequency. Furthermore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to further provide correction to the oscillators once the navigation device obtained precise GPS time in order to more accurately calibrate the system in view of the teachings of Gronemeyer.

Applicants argue that the embodiments of the present invention improve cost and performance by utilizing the reference crystal frequency of the navigation device to the communication device, thus eliminating the need for a second crystal. As noted above, Horton et al, provides this feature of sharing a crystal oscillator frequency between the components of an integrated navigation and communication device. Thus, the applicants' argument is not convincing. Additionally, each of Tawadrous et al, Lau et al, and Krasner similarly teach such, see below.

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

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Tawadrous et al (US2003/0214432) disclose a frequency management system for a hybrid communication/positioning device wherein a single crystal oscillator generates the frequencies required for each of the communication and positioning device.

Lau et al (6,122,506) disclose an integrated GSM/GPS device which share circuitry, minimize the number of crystal oscillators by using frequency synthesizers, and includes a power standby operation for the GSM when no calls are present.

Lau (5,883,594) discloses the conventionality in GPS receivers integrated with communication transceivers of having a standby and normal mode of operations in order to reduce power consumption when the GPS receiver is not required. Lau further teaches that in the low power standby mode the GPS circuits operating power is reduced or inhibited in some or all of the circuits or alternatively/additionally, inhibiting, disabling, or slowing the operating clock in some or all of the circuits. Thus, Lau suggest, in an integrated navigation and communication device, use of a first frequency (oscillator) in a normal operating mode as well as a second, reduced frequency (oscillator) in a standby mode.

Krasner (6,400,314) discloses an integrated GPS/cellular communication device wherein the device shares a crystal oscillator (675) between the GPS portion and the cellular portion.

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gregory C. Issing whose telephone number is 703-306-4156. The examiner can normally be reached on Monday - Thursday 6:00 AM- 4:30 PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Tarcza can be reached on 703-306-4171. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Gregory C. Issing
Primary Examiner
Art Unit 3662

gci